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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,907	08/12/2004	Andre Yu	13418-US-PA	4906

31561 7590 01/23/2008

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
7 FLOOR-1, NO. 100
ROOSEVELT ROAD, SECTION 2
TAIPEI, 100
TAIWAN

EXAMINER
BECK, ALEXANDER S

ART UNIT	PAPER NUMBER
2629	

NOTIFICATION DATE	DELIVERY MODE
01/23/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USA@JCIPGROUP.COM.TW

Office Action Summary	Application No.	Applicant(s)	
	10/710,907	YU ET AL.	
	Examiner	Art Unit	
	Alexander S. Beck	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8 and 10-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 10-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 August 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Acknowledgment is made of the amendment filed Oct. 24, 2007, in which: claims 1, 8, and 12 are amended; and claim 9 is cancelled. Claims 1-8 and 10-17 are currently pending and an Office action on the merits follows.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-8 and 10-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admission of prior art ("AAPA") in view of U.S. Patent No. 5,705,879 to Abe et al. ("Abe") and U.S. Patent No. 6,087,787 to Williams ("Williams").

As to claim 1, AAPA discloses a LCD lighting control system (500) in Figure 5, comprising: a lamp (504); a self-oscillation inverter (502), coupled to a power source (power source) and the lamp (504) for converting electrical energy from the power source to the lamp (504), the self-oscillation inverter (502) operating with a self-oscillation frequency (AAPA, ¶ [0007]), a DC/DC power converter circuit (512), coupled to the self-oscillation inverter (502) and the power source, operated wit h a operation frequency (AAPA, ¶ [0008]), a detecting-feedback circuit (514, 516), coupled to the lamp (504) for detecting a current flowing through the lamp (504) and perform feedback operation and outputting a feedback signal (AAPA, ¶ [0007]); and a modulator (518) coupled to the detecting-feedback circuit (514, 516), a frequency generating circuit (508) and the DC/DC power converter circuit (512), for receiving the feedback signal and the generated frequency for outputting a control signal synchronized with the generated frequency to

the DC/DC power converter circuit (512) for controlling the operation frequency of the DC/DC power converter circuit (512) by the control signal (AAPA, ¶¶ [0007-0008]). AAPA does not disclose expressly wherein the LCD lighting control system (500) comprises: a sampling-frequency generating circuit, coupled to the self-oscillation inverter, for sampling and measuring the self-oscillation frequency for outputting a synchronized frequency; and wherein the modulator (518) is coupled to the sampling-frequency generating circuit for measuring the synchronization frequency and outputting a control signal synchronized with the self-oscillation frequency to the DC/DC power converter circuit, as claimed.

Abe discloses a liquid crystal display lighting control system in Figure 9, comprising: a lamp (20); a self-oscillation inverter (16, 18), coupled to a power source (12) and the lamp, for converting electrical energy from the power source to the lamp, the self-oscillation inverter operating with a self-oscillation frequency; a sampling-frequency generating circuit (16, 18), for sampling and measuring the self-oscillation frequency for outputting a synchronization frequency; a detecting-feedback circuit (22, 26), coupled to the lamp, for detecting a current flowing through the lamp and perform feedback operation and outputting a feedback signal; and a modulator (28), coupled to the detecting-feedback circuit, the sampling-frequency generating circuit and the self-oscillation circuit, for receiving and measuring the feedback signal and the synchronization frequency for outputting a control signal synchronized with the self-oscillation frequency (Abe, col. 10, l. 55 – col. 11, l. 26). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the teachings of AAPA such that a self-oscillation frequency of the self-oscillation inverter was sampled, measured and output as a synchronization frequency, and the modulator receives and measures the feedback signal and the synchronization frequency for outputting a control signal synchronized with the self-oscillation frequency, as taught/suggested by Abe. The suggestion/motivation for doing so would have been to

improve performance of the LCD lighting control system by ensuring that the control signal for driving the self-oscillation inverter is synchronized with the output frequency of the self-oscillation inverter, as one of ordinary skill in the art would appreciate from the teachings of Abe.

While Abe discloses that elements 16 and 18 of Figure 9, taken collectively, perform the functional limitations of both the presently claimed "self-oscillation inverter" and "sampling-frequency generating circuit", there is no explicit disclosure that there are two separate means, which are coupled to one another, and perform the functional limitations of the "self-oscillation inverter" and "sampling-frequency generating circuit", respectively. Williams, analogous in art, discloses a fluorescent-lamp lighting system in Figure 8 comprising: a self-oscillation inverter (46), coupled to a power source (12) and a lamp (18), for converting electrical energy from the power source to the lamp, the self-oscillation inverter operating with a self-oscillation frequency; and a sampling-frequency generating circuit (48, 114), coupled to the self-oscillation inverter, for sampling and measuring the self-oscillation frequency for outputting a synchronization frequency (Williams, col. 5, ll. 14-57; see also col. 8, ll. 53-65). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to further modify the teachings of AAPA and Abe by replacing the combined self-oscillation inverter and sampling-frequency generating circuit with the separate elements of Williams. The suggestion/motivation for doing so would have been to provide a feedback signal that monitors the resonance frequency of the transformer (Williams, Abstract). Thus, examiner respectfully submits that AAPA as modified by Abe and Williams teaches/suggests a sampling-frequency generating circuit, coupled to the self-oscillation inverter, for sampling and measuring the self-oscillation frequency for outputting a synchronized frequency; and wherein the modulator (518) is coupled to the sampling-frequency generating circuit for measuring the synchronization frequency and outputting

a control signal synchronized with the self-oscillation frequency to the DC/DC power converter circuit, as claimed.

As to claim 2, AAPA as modified by Abe and Williams teaches/suggests wherein the sampling-frequency generating circuit (48, 114) samples at a preset sampling location in the self-oscillation circuit (46) (Williams, Fig. 8).

As to claim 3, AAPA as modified by Abe and Williams teaches/suggests wherein the self-oscillation inverter (46) comprises a first transistor (76) and a second transistor (78) (Williams, Fig. 8).

As to claim 4, AAPA as modified by Abe and Williams teaches/suggests wherein the preset sampling location is a collector of the first transistor (76) (Williams, Fig. 8).

As to claim 5, AAPA as modified by Abe and Williams teaches/suggests wherein the preset sampling location is a collector of the second transistor (78) (Williams, Fig. 8).

As to claim 6, AAPA as modified by Abe and Williams teaches/suggests wherein the sampling-frequency generating circuit (48, 114) comprises: a sampling circuit (48), coupled to the self-oscillation circuit (46), for sampling the self-oscillation frequency; and a frequency-generating circuit (114), coupled to the sampling circuit and the modulator, outputting the synchronization frequency after measuring the self-oscillation frequency (Williams, Fig. 8).

As to claim 7, AAPA as modified by Abe and Williams teaches/suggests wherein the detecting-feedback circuit (514, 516) comprises: a detecting circuit (514), coupled to the lamp (504), for detecting the current flowing through the lamp and outputting a

detecting signal; and a feedback compensation circuit (516), coupled to the detecting circuit (516) and the modulator (518), for measuring the detecting signal for outputting the feedback signal (AAPA, ¶¶ [0006-0007]).

As to claim 8, AAPA as modified by Abe and Williams teaches/suggests wherein the DC/DC power converter circuit (512) is a buck circuit (AAPA, Fig. 5).

As to claim 10, AAPA as modified by Abe and Williams teaches/suggests discloses wherein the self-oscillation inverter (46) is a DC/AC inverter (e.g., elements 16 and 18 convert a DC power supply voltage, as is found in portable electronics devices such as a notebook personal computer, into an AC voltage signal to be received by discharge tube for illumination of the portable electronics device).

As to claim 11, AAPA as modified by Abe and Williams teaches/suggests wherein the synchronization frequency is single, double, triple, or multiple of the self-oscillation frequency (Abe, col. 10, l. 55 – col. 11, l. 26).

As to claims 12-17, all of the claim limitations have already been discussed and met by AAPA, Abe and Williams as detailed in the above paragraphs with respect to claims 1-8, 10 and 11.

Response to Arguments

3. Applicant's arguments with respect to claims 1-8 and 10-17 have been considered but are moot in view of the new ground of rejection.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander S. Beck whose telephone number is (571) 272-7765. The examiner can normally be reached on M-F, 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

asb
Jan. 11, 2007

SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER